

IN THE CLAIMS:

1. (Currently Amended) An organic semiconductor device using an organic thin film transistor comprising:

a first electrode formed ~~in contact with~~ over an insulated surface,

a first insulated film formed ~~in contact with~~ over the first electrode,

a second insulated film formed ~~in contact with~~ over the first insulated film, having an opening part at a position superimposed ~~on~~ over the first electrode,

an organic semiconductor film formed in the opening part, and

a second electrode and a third electrode formed ~~in contact with~~ over the organic semiconductor film and the second insulated film,

wherein a top surface of the organic semiconductor film is ~~in alignment with~~ and a top surface of the second insulated film are coplanar with each other.

2. (Previously Presented) The organic semiconductor device according to claim 1, wherein the organic semiconductor film is made of a soluble organic semiconductor material.

3. (Cancelled).

4. (Previously Presented) The organic semiconductor device according to claim 1, wherein the second electrode and the third electrode are made of the same metal having a large work function.

5. (Previously Presented) The organic semiconductor device according to claim 4, wherein the second electrode and the third electrode comprise a metal selected from the group consisting of gold, platinum, chromium, palladium, aluminum, indium, molybdenum and nickel.

6. (Previously Presented) The organic semiconductor device according to claim 1, wherein the organic semiconductor device is incorporated into one selected from the group consisting of a display device, a digital still camera, a laptop personal computer, a mobile computer, a portable image reproducing device comprising a recording medium, a goggle type display, a video camera and a portable phone.

7. (Currently Amended) An organic semiconductor device using an organic thin film transistor comprising:

a first electrode formed ~~in contact with~~ over an insulated surface,

a first insulated film formed ~~in contact with~~ over the first electrode,

a second insulated film formed ~~in contact with~~ over the first insulated film, having an opening part at a position superimposed ~~on~~ over the first electrode,

an organic semiconductor film formed in the opening part, and

a second electrode and a third electrode formed ~~in contact with~~ over the organic semiconductor film and the second insulated film,

wherein a top surface of the organic semiconductor film is ~~in alignment with~~ and a top surface of the second insulated film are coplanar with each other, and

wherein the second electrode and the third electrode are formed without contact with each other.

8. (Previously Presented) The organic semiconductor device according to claim 7, wherein the organic semiconductor film is made of a soluble organic semiconductor material.

9. (Cancelled).

10. (Previously Presented) The organic semiconductor device according to claim 7, wherein the second electrode and the third electrode are made of the same metal having a large work function.

11. (Previously Presented) The organic semiconductor device according to claim 10, wherein the second electrode and the third electrode comprise a metal selected from the group consisting of gold, platinum, chromium, palladium, aluminum, indium, molybdenum and nickel.

12. (Previously Presented) The organic semiconductor device according to claim 7, wherein the organic semiconductor device is incorporated into one selected from the group consisting of a display device, a digital still camera, a laptop personal computer, a mobile computer, a portable image reproducing device comprising a recording medium, a goggle type display, a video camera and a portable phone.

13. (Currently Amended) An organic semiconductor device using an organic thin film transistor comprising:

a first electrode formed ~~in contact with~~ over an insulated surface,

a first insulated film formed ~~in contact with~~ over the first electrode,

a second insulated film formed ~~in contact with~~ over the first insulated film, having an opening part at a position superimposed ~~on~~ over the first electrode,

an organic semiconductor film formed in the opening part, and

a second electrode and a third electrode formed ~~in contact with~~ over the organic semiconductor film and the second insulated film,

wherein a top surface of the organic semiconductor film ~~is in alignment with~~ and a top surface of the second insulated film are coplanar with each other, and

wherein the second insulated film has a tapered rim.

14. (Previously Presented) The organic semiconductor device according to claim 13, wherein the organic semiconductor film is made of a soluble organic semiconductor material.

15. (Cancelled).

16. (Previously Presented) The organic semiconductor device according to claim 13, wherein the second electrode and the third electrode are made of the same metal having a large work function.

17. (Currently amended) The organic semiconductor device according to claim [[15]] 16, wherein the second electrode and the third electrode comprise a metal selected from the group consisting of gold, platinum, chromium, palladium, aluminum, indium, molybdenum and nickel.

18. (Previously Presented) The organic semiconductor device according to claim 13, wherein the organic semiconductor device is incorporated into one selected from the group consisting of a display device, a digital still camera, a laptop personal computer, a mobile computer, a portable image reproducing device comprising a recording medium, a goggle type display, a video camera and a portable phone.

19. (Currently Amended) An organic semiconductor device using an organic thin film transistor comprising:

a first electrode formed ~~in contact with~~ over an insulated surface,

a first insulated film formed ~~in contact with~~ over the first electrode,

a second insulated film formed ~~in contact with~~ over the first insulated film, having an opening part at a position superimposed ~~on~~ over the first electrode,

an organic semiconductor film formed in the opening part, and

a second electrode and a third electrode formed ~~in contact with~~ over the organic semiconductor film and the second insulated film,

wherein a top surface of the organic semiconductor film is ~~in alignment with~~ and a top surface of the second insulated film are coplanar with each other, and

wherein the organic semiconductor film is formed in contact with the first insulated film.

20. (Previously Presented) The organic semiconductor device according to claim 19, wherein the organic semiconductor film is made of a soluble organic semiconductor material.

21. (Cancelled).

22. (Previously Presented) The organic semiconductor device according to claim 19, wherein the second electrode and the third electrode are made of the same metal having a large work function.

23. (Previously Presented) The organic semiconductor device according to claim 22, wherein the second electrode and the third electrode comprise a metal selected from the group consisting of gold, platinum, chromium, palladium, aluminum, indium, molybdenum and nickel.

24. (Previously Presented) The organic semiconductor device according to claim 19, wherein the organic semiconductor device is incorporated into one selected from the group consisting of a display device, a digital still camera, a laptop personal computer, a mobile computer, a portable image reproducing device comprising a recording medium, a goggle type display, a video camera and a portable phone

25. (Currently Amended) A semiconductor device comprising:

a gate electrode provided over a substrate;

a gate insulator comprising a first insulating film and a second insulating film, said first insulating film provided over said gate electrode, said second insulating film provided over said first insulating film, said second insulating film provided with an opening part at a position superimposed over said gate electrode;

a channel region provided over said gate electrode with said gate insulator therebetween, said channel region provided in an organic semiconductor film provided in said opening part; and

a source electrode and a drain electrode provided ~~in contact with~~ over said organic semiconductor film and the second insulated film,

wherein a top surface of said organic semiconductor film ~~is in alignment with~~ and a top surface of said second insulating film are coplanar with each other.

26. (Previously Presented) The organic semiconductor device according to claim 25, wherein the source electrode and the drain electrode comprise a metal selected from the group consisting of gold, platinum, chromium, palladium, aluminum, indium, molybdenum and nickel.

27. (Previously Presented) The organic semiconductor device according to claim 25, wherein said semiconductor device is incorporated into one selected from the group consisting of a display device, a digital still camera, a laptop personal computer, a mobile computer, a portable image reproducing device comprising a recording medium, a goggle type display, a video camera and a portable phone.

28. (Currently Amended) A semiconductor device comprising:

a gate electrode provided over a substrate;

a gate insulator comprising a first insulating film and a second insulating film, said first insulating film provided over said gate electrode, said second insulating film provided over said first insulating film, said second insulating film provided with an opening part at a position superimposed over said gate electrode;

a channel region provided over said gate electrode with said gate insulator therebetween, said channel region provided in an organic semiconductor film provided in said opening part; and

a source electrode and a drain electrode provided ~~in contact with~~ over said organic semiconductor film and the second insulated film,

wherein a top surface of said organic semiconductor film ~~is in alignment with~~ and a top surface of said second insulating film are coplanar with each other, and

wherein a rim of said opening part is tapered.

29. (Previously Presented) The organic semiconductor device according to claim 28, wherein the source electrode and the drain electrode comprise a metal selected from the group consisting of gold, platinum, chromium, palladium, aluminum, indium, molybdenum and nickel.

30. (Previously Presented) The organic semiconductor device according to claim 28, wherein said semiconductor device is incorporated into one selected from the group consisting of a display device, a digital still camera, a laptop personal computer, a mobile computer, a portable image reproducing device comprising a recording medium, a goggle type display, a video camera and a portable phone.

31. (Currently Amended) A semiconductor device comprising:

a gate electrode provided over a substrate;

a gate insulator comprising a first insulating film and a second insulating film, said first insulating film provided over said gate electrode, said second insulating film provided

over said first insulating film said second insulating film provided with an opening part at a position superimposed over said gate electrode;

a channel region provided over said gate electrode with said gate insulator therebetween, said channel region provided in an organic semiconductor film provided in said opening part; and

a source electrode and a drain electrode provided ~~in contact with~~ over said organic semiconductor film and the second insulated film,

wherein a top surface of said organic semiconductor film ~~is in alignment with~~ and a top surface of said second insulating film are coplanar with each other, and

wherein said organic semiconductor film is provided in contact with said first insulating film.

32. (Previously Presented) The organic semiconductor device according to claim 31, wherein the source electrode and the drain electrode comprise a metal selected from the group consisting of gold, platinum, chromium, palladium, aluminum, indium, molybdenum and nickel.

33. (Previously Presented) The organic semiconductor device according to claim 31, wherein said semiconductor device is incorporated into one selected from the group consisting of a display device, a digital still camera, a laptop personal computer, a mobile computer, a portable image reproducing device comprising a recording medium, a goggle type display, a video camera and a portable phone.